REMARKS

Claims 27-33, 36-39 and 46-62 were pending in the application. Claims 27 and 33 have been amended. Claims 46-48 have been canceled. Accordingly, upon entry of the amendments presented herein, claims 27-33, 36-39 and 49-62 will remain pending in the application.

Claims 27 and 33 have been amended to specify that the claimed method encompasses a nucleic acid encoding an antibody or fragment thereof *linked to a transmembrane protein domain from platelet derived growth factor receptor*. Support for this amendment is available, at least for example, in page 2 (lines 18-21); page 3 (lines 15-21); page 4 (lines 31-33); page 7 (lines 3-8); page 30 (lines 24-28); and original claims 18, 24, and 41.

The foregoing amendments should in no way be construed as an acquiescence to any of the Examiner's rejections, and have been made solely to expedite examination of the present application and to place the pending claims in better condition for appeal. No new issues have been raised and no additional search should be required. Accordingly, Applicant respectfully requests that the foregoing claim amendments be entered. Applicant reserves the right to pursue the claims as originally filed in this or a separate application(s). No new matter has been added.

Priority

Applicants gratefully acknowledge the Examiner's acknowledgement that the specification provides the requisite reference to parent application 09/203,958 and includes the current status of the application.

Acknowledgment of the Examiner's Withdrawal of Certain Rejections and Objections

Applicants gratefully acknowledge the Examiner's withdrawal of the following rejections: (a) the previous rejection of claims 27-34 and 39 under 35 U.S.C. 112, first paragraph as failing to comply with the written description requirement; (b) the previous rejection of claims 33 and 35-39 under 35 U.S.C. 112, first paragraph for lacking a fully enabling disclosure; (c) the previous rejection of claim 35 under 35 U.S.C 112, second paragraph as being indefinite; (d) the previous rejection of claims 27, 31-35 and 38-39 under 35 U.S.C. 102(a) as being anticipated by Ledbetter *et al.* (WO 97/20048, June 5, 1997); and (e) the rejection of claims 27-30 under 35 U.S.C. 103(a) as being unpatentable over Ledbetter *et al.* in view of Fanger *et al.*, (WO 91/00360, January 10, 1991).

Rejection of Claims 46-47 Under 35 U.S.C. § 112, First Paragraph

Claims 46-47 are rejected under 35 U.S.C. 112, first paragraph, as introducing new matter. Specifically, the Examiner states that these claims read broadly on a cell which separately expresses an antibody which binds to an Fc receptor and a transmembrane domain, a concept the Examiner asserts is not disclosed in the specification as originally filed.

Applicants respectfully traverse this rejection. However, to expedite prosecution, claims 46-47 have been canceled, thereby rendering this rejection moot. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw this rejection.

Objection to Claims 47-48

Claims 47-48 are objected to as containing a typographical error, *i.e.*, these claims recite "from from" in line 2.

To expedite prosecution, claims 46-47 have been canceled, thereby rendering this objection moot. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw this objection.

Rejection of Claims 27, 31-33, 36-39, 46 and 49-62 Under 35 U.S.C. § 103(a)

Claims 27, 31-33, 36-39, 46 and 49-62 are rejected as being unpatentable over Ledbetter *et al.* (WO 97/20048, June 5, 1997) in view of Guyre *et al.* (*Cancer Immunol Immunother.* 1997 Nov-Dec;45(3-4):146-8). The Examiner relies on Ledbetter for teaching

> the construction of recombinant expression vectors which comprise a fusion protein comprising a single chain Fv molecule operatively linked to a transmembrane domain of a cell surface receptor and the use of said vector to transfect cells in vitro/ex vivo (Ledbetter et al., pages 6-7, page 12, lines 14-20, and page 21). Ledbetter et al. further teaches that the single chain Fv binds FcγR, Fcα, or FcεR, including CD64 which is FcγRI (Ledbetter et al., pages 6-7, bridging paragraph). Ledbetter et al. further teaches that the transfected cells expressing the single chain Fv fusion protein on the cell surface can be used in ex vivo or in vivo methods for enhancing a T cell response in a subject (Ledbetter et al., page 12). In particular, Ledbetter et al. teaches that autologous or allogeneic cells, such as tumor cells, are genetically modified to produce the sFV on the cell surface ex vivo and then administered to the subject to stimulate a T cell response (Ledbetter et al., page 12, lines 20-30).

Although the Examiner acknowledges that "Ledbetter *et al.* does not specifically teach the H22 antibody which recognizes CD64," the Examiner asserts that "Guyre *et al.* supplements Ledbetter *et al.* by teaching the H22 antibody and its use in generating fusion proteins with gp120 or tetanus toxin" and "provides motivation for using the H22 antibody in the single chain fusion protein taught by Ledbetter et al. by teaching that the H22 antibody binds to CD64 outside the ligand-binding domain of the receptor such that binding of H22 is not inhibited by serum IgG."

Applicants respectfully traverse this rejection for the reasons of record. However, to expedite prosecution, claims 46-48 have been canceled without prejudice, thereby rendering this rejection moot with respect to these claims. Additionally, claims 27 and 33 (and claims dependent therefrom) have been amended to incorporate the subject matter of claim 48, which is not subject to this rejection, *i.e.*, these claims have been amended to specify that the claimed methods encompass a nucleic acid encoding an antibody or fragment thereof linked to *a transmembrane protein domain from platelet derived growth factor receptor*. Accordingly, claim 33 (and claims dependent therefrom) are novel and inventive over the cited references and Applicants respectfully request that the Examiner reconsider and withdraw this rejection.

Rejection of Claims 27-30 Under 35 U.S.C. § 103(a)

Claims 27-30 are rejected as being unpatentable over Ledbetter *et al.* (WO 97/20048, June 5, 1997) in view of Guyre *et al.* (*Cancer Immunol Immunother.* 1997 Nov-Dec;45(3-4):146-8) and Fanger *et al.*, (WO 91/00360, January 10, 1991). The Examiner relies on Ledbetter *et al* and Guyre *et al.* for the reasons discussed above. Although the Examiner acknowledges that "Ledbetter et al. differs from the instant invention by not teaching the administration of an agent to increase the expression of Fc receptors on effector cells," the Examiner alleges that "Fanger et al. supplements Ledbetter et al by teaching that in a related method of inducing immune responses by targeting effector cells with an antibody that binds to the Fc receptor, it is useful to pretreat the effector cells, such as macrophages, with IFN-gamma and/or TNF, IL-2 and colony stimulating factor." The Examiner furthers alleges that "Fanger et al. provides motivation for treating the effector cells with IFN-gamma or other cytokines by teaching that IFN-gamma increases the number of Fc receptors for attachment to the targeting antibody and that cytokines such as TNF further activate the effector cell (Fanger et al., page 10)."

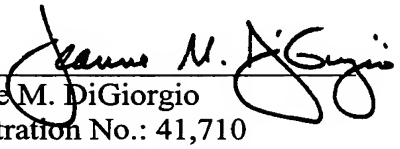
Applicants respectfully traverse this rejection for the reasons of record. However, to expedite prosecution, claim 27 (and claims depending therefrom) has been amended to incorporate the subject matter of claim 48, which is not subject to this rejection, *i.e.*, these claims have been amended to specify that the claimed methods encompass a nucleic acid encoding an antibody or fragment thereof linked to *a transmembrane protein domain from platelet derived growth factor receptor*. Accordingly, claim 27 (and claims dependent therefrom) is novel and inventive over the cited references and Applicants respectfully request that the Examiner reconsider and withdraw this rejection.

CONCLUSION

In view of the above amendments and remarks set forth above, it is respectfully submitted that this application is in condition for allowance. If there are any remaining issues or the Examiner believes that a telephone conversation with Applicants' Attorney could be helpful in expediting prosecution of this application, the Examiner is invited to call the undersigned at (617) 227-7400.

Dated: June 12, 2007

Respectfully submitted,

By 

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